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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/890,597

05/24/2002

Wolfgang Dultz

5232

26646

7590

06/15/2006

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NEW YORK, NY 10004

EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,597

Applicant(s)

DULTZ ET AL.

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/03/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas et al (US Patent No. 5,311,346) in view of Ono (US Patent No. 5,473,457).

Regarding claims 13 and 17, referring to Figures 1 and 2, Haas discloses a method for reducing distortion of an optical pulse contained in a communication-transmitting luminous flux in an optical communication system caused by polarization mode dispersion, comprising:

driving a polarization-controlling device to adjust a polarization of the optical pulse so that a transmission quality of the optical communication system is maximized, wherein the driving of the polarization-controlling device functions in response to the

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transmission quality detected (As indicated in Figure 1, a control circuit 30 driving a polarization controlling device 32 response to the transmission quality detected, col. 3, lines 32-67 and col. 4, lines 1-63).

Haas differs from claims 13 and 17 in that he fails to teach using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system. However, Ono in US Patent No. 5,473,457 teaches using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system (Figure 1, col. 3, lines 30-67 and col. 4, lines 1-60). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system as taught by Ono in the system of Haas. One of ordinary skill in the art would have been motivated to do this since Ono suggests in column 3, lines 30-67 and col. 4, lines 1-60 that using such the using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system have advantage of allowing compensating the dispersion of the signal and to reduce the diction of the signal and improving the quality of the signal.

Regarding claim 14, Hass further teaches resetting the polarization of the optical pulse in predefined time intervals for optimizing communication (Fig. 1, col. 3, lines 32-67 and col. 4, lines 1-63).

Regarding claims 15 and 18, Hass further teaches wherein the polarization of the optical pulse is controlled at an input end of the optical communication system (Fig. 1, col. 3, lines 32-67 and col. 4, lines 1-63).

Regarding claim 16, Hass further teaches altering the polarization of the optical pulse at an output end of the optical communication system using the polarization-controlling device, wherein the optical pulse propagates through an analyzer following the optical communication system (Fig. 1, col. 3, lines 32-67 and col. 4, lines 1-63).

Regarding claim 19, the combination of Hass and Ono teaches an analyzer, the analyzer being disposed in a propagation direction of a light, downstream from the polarization-controlling device; and wherein the polarization-controlling device is disposed at the output of the optical transmission medium (Fig. 1 of Haas and Fig. 1 of Ono).

Regarding claim 20, the combination of Hass and Ono teaches the polarization-controlling device includes a first $\lambda/4$ delay element, a $\lambda/2$ delay element and a second $\lambda/4$ delay element, the first $\lambda/4$, $\lambda/2$ and second $\lambda/4$ delay elements being disposed in series as $\lambda/4$ - $\lambda/2$ - $\lambda/4$ and being adjustable (Fig. 1 of Haas, col. 4, lines 8-35).

Regarding claim 21, the combination of Hass and Ono teaches the analyzer is a linear analyzer, and the polarization-controlling device includes at least an adjustable $\lambda/4$ delay element and an adjustable $\lambda/2$ delay element (Fig. 1 of Haas, col. 4, lines 8-35).

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Regarding claims 22 and 23, the combination of Hass and Ono teaches wherein at least one delay element includes a liquid crystal element or an electro-optical crystal (Fig. 1 of Haas, col. 4, lines 8-35).

Regarding claim 24, the combination of Hass and Ono teaches at least one delay element includes at least one of a mechanically adjustable element, an electromotively adjustable element and a piezoelectrically adjustable element of three fiber loops (Fig. 1 of Haas, col. 4, lines 8-35).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER